STATE OF VERMONT
PUBLIC SERVICE BOARD

Docket No. 7892

Petition of Vermont Electric Power Company, Inc. and Vermont Transco LLC (together,"VELCO"), for a certificate of public good, pursuant to 30 V.S.A. Section 248, for approval to restore an existing 115 kV line that extends from Highgate to Irasburg, Vermont (the VELCO "K-41 Line") to its intended post-2005 MVA rating	Technical Hearing at Montpelier, Vermont November 13, 2012

Order entered: 1/17/2013

HEARING OFFICER: Mary Jo Krolewski, Utilities Analyst

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I. INTRODUCTION

This case involves a petition filed by Vermont Electric Power Company, Inc. and Vermont Transco LLC (together,"VELCO") on June 4, 2012. The petition requests a certificate of public good ("CPG"), pursuant to 30 V.S.A. § 248, authorizing the restoration of an existing 115 kV line that extends from Highgate to Irasburg, Vermont (the "K-41 Line").

In this Proposal for Decision, I recommend that the Vermont Public Service Board ("Board") approve the proposed project and issue a CPG to VELCO authorizing the construction and operation of the proposed project.

II. PROCEDURAL HISTORY

In a July 20, 2011, Order, VELCO, was granted a waiver, pursuant to 30 V.S.A. § 248(k), to allow for the emergency replacement of twelve existing H-frame pole structures and the installation of three new H-frame pole structures on VELCO's K-41 line in the Towns of Highgate, Sheldon, Enosburg, Berkshire, Richford, Jay, Troy, Newport, Coventry and Irasburg, Vermont.

On June 4, 2012, VELCO filed a petition for a CPG, pursuant to 30 V.S.A. § 248, authorizing the restoration of the K-41 Line that extends from Highgate to Irasburg, Vermont.

On August 7, 2012, I held a prehearing conference at the Board's hearing room in Montpelier, Vermont.

On September 11, 2012, a site visit was held at the proposed project area and a public hearing was held at the Enosburg Public Safety Building in Enosburg Falls, Vermont. One member of the public attended the public hearing and asked some general questions about the proposed project.

On October 19, 2012, VELCO, the Department of Public Service ("Department"), and the Agency of Natural Resources ("ANR") filed a Memorandum of Understanding ("MOU") with proposed findings of fact and a proposed order.

In a November 1, 2012, memorandum, I identified five questions regarding the petition and requested that VELCO be prepared to answer them at the technical hearing.

A technical hearing was held on November 13, 2012, in the Board's hearing room in Montpelier, Vermont. At the hearing, the prefiled testimony and exhibits of VELCO were entered into evidence.

III. FINDINGS

Based on the substantial evidence of record and the testimony presented at the hearing, I hereby report the following findings to the Board in accordance with 30 V.S.A. § 8.

Background and Project Description

1. VELCO's offices are located at 366 Pinnacle Ridge Road, Rutland, Vermont. VELCO is a company as defined by 30 V.S.A. § 201, and as such, is subject to the Board's jurisdiction pursuant to 30 V.S.A. § 203. Petition at 1.

2. VELCO owns and operates a 115 kV transmission line that extends from Irasburg to Highgate, Vermont (the "K-41 Line"). Underwood pf. at 2.

3. VELCO performed a North American Electric Reliability Corporation ("NERC") recommended inspection of the K-41 line in the fall of 2010, and discovered a number of locations where the line clearances were out of compliance with the National Electric Safety Code ("NESC"). For 115 kV lines, the NESC requires a minimum ground clearance of 16.1 feet in areas without vehicular traffic and 20.1 feet in areas with vehicular traffic. At ambient temperatures of 61°F or higher, the K-41 Line cannot carry any current at all without violating NESC clearances. Underwood pf. at 6-7; exh. VELCO-ZU-2.

4. VELCO removed the line from service in the spring of 2011, because the K-41 Line failed to meet clearance standards under certain potential operating parameters. NERC recommends that as soon as a transmission owner discovers an NESC violation, the line should be de-rated or taken out of service until the violation is corrected. Since de-rating the line would not resolve the clearance violations, VELCO took the line out of service. Underwood pf. at 7; exh. VELCO-ZU-2.

5. In a July 20, 2011, Order, VELCO was granted a waiver, pursuant to 30 V.S.A. § 248(k), to allow for the emergency replacement of twelve existing H-frame pole structures and the installation of three new H-frame pole structures on the K-41 Line in the Towns of Highgate, Sheldon, Enosburg, Berkshire, and Richford, Vermont. The July 20, 2011, Order required VELCO to file, within one year of the date of the Order, a petition for a CPG, pursuant to Section 248, authorizing the completed emergency work. Underwood pf. at 4; McNamara pf. at 5; exh. VELCO-WFM-2-REV.

6. VELCO completed the emergency work and returned the line to service at the end of July of 2011. The emergency work allowed the line to be returned to service at the reduced design thermal rating of approximately 100 MVA (mega volt amperes). Underwood pf. at 7.

7. The proposed project will restore the K-41 Line to a full design thermal rating of 150 MVA (mega volt amperes). Underwood pf. at 7.

8. The K-41 Line consists of an approximate 51-mile, single and double circuit, 115 kV transmission line (the double-circuit sections also carry a 46 kV transmission line). The K-41 Line is comprised of 330 wood-pole double-circuit structures and 210 wood-pole single-circuit structures and runs between Irasburg and Highgate, Vermont, and consists of three linked segments: (1) Irasburg to Mosher's Tap (a VELCO facility in Newport) – an approximately six-mile, wood-pole double-circuit segment, with a small number of steel poles; (2) Mosher's Tap to Richford – an approximately twenty-two-and-one-half mile, wood-pole double-circuit segment; and (3) Richford to Highgate – an approximately twenty-two-and-one-half mile, primarily wood H-frame two-pole single-circuit segment. McNamara pf. at 3; Underwood pf. at 6.

9. The proposed project includes the emergency work performed in 2011, and will consist of replacing an additional 24 structures and installing two new structures. All the replaced and installed structures will occur on the single-circuit, wood H-frame configured portion of the transmission line from Richford to Highgate. Underwood pf. 2nd supp. at 2; McNamara pf. at 5; exhs. VELCO-WFM-2-REV and VELCO-WFM-4-REV.

10. The replacement structures for the proposed project will use poles 10 to 25 feet greater in height than the existing poles, with the average replacement structure approximately 15 feet higher in above-ground height. The additional structure height will provide additional conductor clearance in the adjacent spans by raising the conductor attachment points at the replacement structure. The existing poles will be removed after the installation of the new poles, except for structure 290, located near the Missisquoi River, which will be cut off at ground level. McNamara pf. at 5; exhs. VELCO-WFM-3-REV and MOU.

11. The proposed project will include the installation of two new mid-span structures in intermediate locations in the existing spans. The installation of new mid-span structures will be more efficient than replacing the existing structures, based on where the additional clearance is needed (i.e., to address the clearance concern by replacing an existing structure would result in a very tall replacement structure to accomplish the same clearance improvement the shorter

mid-span structures provide). McNamara pf. at 6; Underwood pf. at 6; Underwood pf. 2nd supp. at 2.

12. The proposed project will maintain the existing structure configurations. The two poles of the most common replacement structure, a tangent H-frame suspension structure, will be spaced 14 feet apart, the same as the existing configuration of the transmission line. Three of the replacement structures are three-pole guyed angle structures, with the poles spaced 14 feet apart. McNamara pf. at 6; exh. VELCO-WFM-3-REV.

13. The proposed project will reuse the existing three ACSR (aluminium conductors steel reinforced) conductors, one conductor for each of the three phases, as well as the two galvanized steel shield wires, which will attach to the top of the poles to provide lightning protection. McNamara pf. at 6; exh. VELCO-WFM-3-REV.

14. The proposed project will improve the lightning shielding properties on the replacement structures, by increasing the distance between the shield wire and the conductors, from approximately 6 feet to approximately 12 feet. The shielding improvement, in addition to the conductor clearance improvements, contributes to the increases in structure heights. McNamara pf. at 6-7.

15. The proposed project will utilize existing VELCO facilities (i.e., the Highgate Substation, the Highgate Converter, the Irasburg Substation, and the Newport Substation) for delivery and handling of some project materials, including insulators and other necessary hardware, which do not require large areas for temporary storage. Underwood pf. at 8.

16. The proposed project during construction will require the use of a lay-down area for approximately four months for the required poles and cross arms. The lay-down area will be located within an existing gravel pit operation in Enosburg, Vermont. The lay-down area will likely include the installation of a 40-foot Conex (material storage) box alongside an existing storage box used by the landowner. The subcontractor for the proposed project will require an office trailer at the lay-down area adjacent to the gravel pit's main office building. The lay-down area will be used to store poles, material, equipment and vehicles, and as a meeting area for project workers. Underwood/Follensbee pf. supp. at 3.

Orderly Development of the Region

[30 V.S.A. § 248(b)(1)]

17. The proposed project will not unduly interfere with the orderly development of the region, with due consideration having been given to the recommendations of the municipal and regional planning commissions, the recommendations of municipal legislative bodies, and the land conservation measures contained in the plan of any affected municipality. This finding is supported by findings 18 through 32, below.

18. The proposed project includes structure replacements and additions to an existing transmission line and does not include new extensions or changes to the path of the existing line. The proposed construction lay-down area will be located within the confines of an existing, active gravel pit and will not result in any permanent development. Underwood pf. at 19; Underwood/Follensbee pf. supp. at 3-4.

19. The proposed project is consistent with the Highgate Town Plan. The Plan does not contain recommendations directly relating to the siting of electric transmission facilities. The Plan discusses the transmission lines and Highgate Converter operated by VELCO, and states these facilities may prove valuable in powering industrial and consumer needs for Highgate's future. Underwood pf. at 20; exh. VELCO-ZU-6.

20. The proposed project is consistent with the Sheldon Town Plan. The Plan does not contain recommendations directly relating to the siting of electric transmission facilities. The Plan states that "[t]he impacts of growth, development, and environmental change on the land should be taken into consideration before any changes are made to the land. These changes will have a lasting effect on the community for years to come." The proposed project will optimize the use of the existing utility corridor, thereby reducing impacts to natural and cultural resources. Underwood pf. at 20; exh. VELCO-ZU-7.

21. The proposed project is consistent with the Town Plan of Enosburg. The Plan does not provide specific guidance regarding the siting of transmission facilities, but articulates the following goals: (1) to look ahead and predict future needs for public utilities which support concentrated residential, commercial, and industrial development; (2) to provide public utilities which support concentrated residential, commercial and industrial development; (3) to insure

reliable, safe, clean, and affordable energy to all residents; and (4) to maintain Enosburg's agricultural and rural character and scenic resources by encouraging development to follow wise land-use practices. The proposed project will occur within the existing right-of-way, following existing land-use practices, and will enhance the safety and reliability of the transmission system. Underwood pf. at 21; exh. VELCO-ZU-8.

22. The proposed project is consistent with the Enosburg Falls Village Municipal Plan. The Plan establishes a goal "[t]o promote greater efficiency in providing public utilities and services, and to increase public awareness of energy conservation benefits and opportunities." The Plan also recommends improving "communication between the Planning Commission, Village Trustees, and Village Manager about the location and priority of sewer, water, and electric line extensions and upgrades." Underwood pf. at 21-22; exh. VELCO-ZU-9.

23. The proposed project is consistent with the Berkshire Municipal Plan. The Plan establishes a goal to "[e]nsure reasonable, functional and orderly development of all utilities, facilities, and services." The Plan encourages public utilities to use existing corridors in order to minimize impacts and assist in desired development. Underwood pf. at 22; exh. VELCO-ZU-10.

24. The proposed project is consistent with the Richford Municipal Plan. The Plan does not give specific guidance regarding the siting of transmission facilities, and does not discuss VELCO's existing transmission line. Underwood pf. at 22.

25. The proposed project is consistent with the Jay Community Development Plan. The Plan does not discuss VELCO's transmission line or the siting of electric transmission facilities. Underwood pf. at 22.

26. The proposed project is consistent with the Troy Town Plan. The Plan recognizes that the VELCO transmission line running east-west through town is one element of the region's electric infrastructure. The Plan contains an energy goal to "[m]aintain an adequate, reliable and secure energy supply in town." Underwood pf. at 23; exh. VELCO-ZU-11.

27. The proposed project is consistent with the Proposed Comprehensive Plan for the Town of Newport. The Plan does not contain recommendations directly relating to the siting of electric transmission facilities, but recognizes the constructed transmission line of the proposed project that travels through Newport Town. Underwood pf. at 23.

28. The proposed project is consistent with the Town of Coventry Municipal Plan. The Plan references a future electric utility expansion, which became the Northern Loop, 115 kV line that runs from Irasburg to Mosher's Tap, that was placed into service in June 2005, and formed a loop with existing power lines to serve as a backup power source. Underwood pf. at 23-24; exh. VELCO-ZU-12.

29. The Town of Irasburg has neither a town plan in effect, nor zoning regulations. Underwood pf. at 24.

30. The proposed project is consistent with the Northwest Regional Planning Commission's Plan ("NW Regional Plan"). The NW Regional Plan supports "[e]fficient, targeted public investment in infrastructure and services to support new development in designated regional and local growth centers." The NW Regional Plan's goals and policies include: (1) to insure that the region's infrastructure has adequate capacity to meet current needs and planned growth in a timely and cost-effective manner; (2) whenever feasible utilities should share rights-of-way and/or easements; (3) development or maintenance of utility systems or facilities that result in or create an undue adverse impact on municipal services, natural resources and/or other unique features shall be discouraged. The proposed project will be constructed in the existing utility corridors and will replace existing structures in order to safely and reliably maintain the system. Underwood pf. at 24-25; exh. VELCO-ZU-13.

31. The proposed project is consistent with the Northeastern Vermont Development Association Plan ("NVDA Plan"). The NVDA Plan includes the following regional energy goals: (1) provide an adequate, reliable, and secure energy supply to meet the region's needs; and (2) limit the negative aesthetic impacts of power generation and distribution facilities. One of the strategies identified by the NVDA Plan to support these goals is to "[p]romote the upgrade of regional transmission systems to reduce gateway constraints." The proposed project supports these goals and strategy by improving the safety and reliability of the existing transmission line. Underwood pf. at 25; exh. VELCO-ZU-14.

32. The town and regional plans do not contain applicable land conservation measures for the proposed project area. Underwood pf. at 26.

Need for Present and Future Demand for Service

[30 V.S.A. § 248(b)(2)]

33. The proposed project is required to meet the need for present and future demand for service which could not otherwise be provided in a more cost-effective manner through energy conservation programs and measures and energy efficiency and load management. This finding is supported by findings 34 through 44, below.

34. The K-41 Line transfers bulk power between the Highgate and Irasburg substations. The K-41 Line needs to maintain an intended rating of 150 MVA to continue the line's power transfer capability, at present and future levels. Harding pf. at 4.

35. The Project area will benefit Vermont Electric Cooperative, Inc's ("VEC") 46 kV system and VELCO's new Jay Peak Substation, which the Board permitted in Docket 7708. Presently, VEC's 46 kV system in the area of need connects to VELCO's 115 kV system at the Highgate and Irasburg substations with the 46 kV lines leaving these stations operated radially. Once VELCO connects these VEC-owned 46 kV lines to the VELCO Jay Substation, VELCO can loop together its Irasburg and Jay substations with the 115/46 kV transformers, thus introducing a significant new reliability benefit for the area. Harding 3-4.

36. The K-41 Line is designed to operate at a nominal voltage rating of 115 kV and a thermal rating of 150 MVA (summer normal limit). A transmission line needs to be able to operate at its thermal rating limit all year round, because this is the basis for all reliability determinations with respect to the total number of system elements. A system is classified as a normal or "N-0" state when all system elements are within their thermal rating limits before any contingencies occur. Harding pf. at 4-5.

37. NERC requires transmission operators to develop their own facility thermal ratings and to document their rating methodology to ensure compliance with thermal reliability ratings criteria. VELCO rated the K-41 Line at 150 MVA according to VELCO's Rating Procedure EP-1, Section 3.2.3 ,which sets forth VELCO's equipment rating methodology for overhead conductors. VELCO concluded that 150 MVA was an adequate thermal rating based upon results from previous studies which showed no criteria violation on the K-41 Line with this thermal rating. Harding pf. at 5; exhs. VELCO-SAH-3 and VELCO-SAH-4.

38. The K-41 Line does not presently comply with VELCO's required MVA rating. The K-41 Line presently operates at approximately 100 MVA. The proposed project will allow operation at the intended 150 MVA rating. Harding pf. at 6.

39. ISO-New England's ("ISO-NE") Operating Procedure 19 ("OP-19") establishes reliability criteria for the operation of transmission lines. Specifically, OP-19 requires the New England transmission system (69 kV and above) to operate "so that the most severe single contingency can be sustained without causing equipment damage due to thermal overload, [and] cascading thermal overloads." OP-19 also requires VELCO to establish and maintain Normal Conditions, defined as non-stressed conditions, where the highest level of reliability can be achieved. OP-19 permits transmission facilities to operate at a lower level of reliability during Emergency Conditions, defined as stressed conditions, but states that such conditions should be avoided. Harding pf. at 6; exh. VELCO-SAH-5.

40. The K-41 Line does not presently comply with OP-19 operating at 100 MVA. Restoring the K-41 Line at its intended thermal rating of 150 MVA allows the line to remain in service under Normal Conditions and under Emergency Conditions. Harding pf. at 6-7.

41. VELCO has performed transmission planning studies assuming that the K-41 Line operates at 150 MVA, including the 2010 VELCO/VEC 10-Year Needs Assessment, the 2009 and 2012 Long Range Transmission Plans, and the Jay Area Reliability Study. ISO-NE also performed transmission planning studies assuming that the K-41 Line operates at 150 MVA, including the 2010 Vermont/New Hampshire Regional Needs Assessment. Several generation interconnection system impact studies, including the wind generation projects in Sheffield and Lowell, assumed a 150 MVA thermal rating. A thermal rating of 150 MVA is needed to maintain reliability in the transmission study areas and to allow for adequate operation of the transmission network. Harding pf. at 7-9.

42. ISO-NE requested that VELCO bring the K-41 Line back to 150 MVA. If the K-41 Line is not returned to 150 MVA, ISO-NE will request that VELCO conduct a study to show that no negative impacts to the transmission system exist in the area of need. VELCO's analysis will show that there are negative impacts associated with operating the K-41 Line at a 100 MVA

rating, which would in turn affect the planning studies and system impact studies that assumed 150 MVA operation. Harding pf. at 10.

43. The proposed project cannot be avoided with non-transmission alternatives ("NTAs"). In the case of the K-41 Line, these NTAs would not be effective because the line is a key element in a bulk power interface that transfers power between the Hydro Quebec and New Hampshire systems rather than serving load that could be reduced through energy efficiency or local generation. The transfer of bulk power on the K-41 Line does not depend solely on load in the area and the highest transfers can be at periods of light load and high generation dispatch. Harding pf. at 11.

44. At a September 9, 2011, meeting of the Vermont System Planning Committee ("VSPC"), VELCO provided an explanation of the need and timing of the proposed project. The VSPC did not request NTA analysis. Underwood pf. at 15.

System Stability and Reliability

[30 V.S.A. § 248(b)(3)]

45. The proposed project will not adversely affect system stability or reliability. This finding is supported by findings 46 through 49, below.

46. The proposed project will restore the thermal rating of the K-41 Line to 150 MVA, which is necessary to maintain the existing system stability and reliability of the transmission system. The proposed project will have no adverse impact on the Vermont transmission system. Harding pf. at 12.

47. Multiple reliability, operations and system impact studies have evaluated the K-41 Line at its intended rating and have found that the K-41 Line rating of 150 MVA is adequate with respect to thermal reliability ratings criteria. Harding pf. at 10.

48. VELCO discussed the proposed project with ISO-NE Operations, Planning and Governance representatives and those representatives concluded that no approval by ISO-NE was necessary since ISO-NE considers the proposed project to be a maintenance project. Harding pf. at 12.

49. Line outages will be required and are scheduled to minimize contingency impact to the transmission system. VELCO has preliminarily submitted outage requests to ISO-NE for this work. Customer outages are not expected as a result of this work. Underwood pf. at 9

Economic Benefit to the State

[30 V.S.A. § 248(b)(4)]

50. The proposed project will result in an economic benefit to the state and its residents. This finding is supported by findings 51 through 53, below.

51. The proposed project resolves maintenance and safety needs and creates reliable regional network service. Operating and maintaining a reliable electric transmission infrastructure and power supply delivery system creates economic benefits to the citizens of Vermont. Underwood pf. at 26.

52. The total cost of the K-41 Line upgrade is estimated at $4,638,446. This cost estimate is comprised of $2,217,292 of direct costs, $1,449,512 of indirect costs, $269,671 in escalation, $96,957 in capital interest, and $605,015 in contingency. The total actual costs of the K-41 emergency work were $946,444. The total cost is comprised of $590,373 of direct costs, $349,376 of indirect costs, and $6,695 in capital interest. Underwood pf. at 13; Underwood pf. 2nd supp. at 3; exh. VELCO-ZU-3-REV.

53. VELCO anticipates that 100 percent of the associated costs of the proposed project will be borne by the region because the proposed project meets the ISO-NE definition of a pooled transmission facility. Vermont will pay only its load ratio share of the regionalized project costs. Presently, Vermont's load ratio share of regional costs is approximately 4 percent. Underwood pf. at 14.

Aesthetics, Historic Sites, Air and Water Purity,
the Natural Environment and Public Health and Safety

[30 V.S.A. § 248(b)(5)]

54. The proposed project will not have an undue adverse effect on aesthetics, historic sites, air and water purity, the natural environment, the use of natural resources, and public health and

safety, with due consideration having been given to the criteria specified in 10 V.S.A. §§ 1424(a)(d) and 6086(a)(1)-(8)(a) and (9)(k) and greenhouse gas impacts. This finding is supported by findings 55 through 137, below.

Public Health and Safety

[30 V.S.A. § 248(b)(5)]

55. The proposed project will not have any undue adverse impacts on public health or safety. This finding is supported by findings 56 through 58, below.

56. The proposed project will use the National Electrical Safety Code ("NESC") standards and the related VELCO standards for the structural design of the new and replacement line structures. McNamara pf. at 8.

57. The proposed project will result in a direct improvement in health and safety. VELCO will design and construct the Project in accordance with the NESC requirements. VELCO will adhere to prudent utility construction practices throughout the construction phase and the Project will not endanger the public or adjoining landowners. VELCO will operate and maintain the K-41 Line in a safe manner. Underwood pf. at 27.

58. VELCO anticipates that it may use a combination of blasting and core drilling for pole locations, but cannot confirm if blasting will be necessary until its contractors inspect the specific pole locations. If VELCO's contractors determine that the proposed project will require the need for blasting, VELCO will develop a blasting plan prior to commencement of any blasting activities and submit it to the Board for approval prior to blasting. Underwood pf. at 8; exh. MOU at 4.

Outstanding Resource Waters

[10 V.S.A. § 1424(a)(d)]

59. There are no waters on or near the proposed project that have been designated as outstanding resource waters by the Water Resources Board. Follensbee pf. at 5.

Air Pollution

[10 V.S.A. § 6086(a)(1)]

60. The proposed project will not result in undue air pollution. This finding is supported by findings 61 through 67, below.

61. The proposed project will result in limited noise and air emissions generated from the operation of diesel and gasoline powered equipment and machinery due to construction activity. These emissions will be limited in duration and frequency and will not result in an appreciable amount of air pollution. There will be no ongoing emissions or noise generated from the operation of the proposed project.

62. Dust generated from construction activities along the K-41 Line will be controlled in accordance with the Vermont Standards and Specifications for Erosion Prevention and Sediment Control. Follensbee pf. at 5.

63. The scheduled outage for the proposed project is six weeks, starting on March 4, 2013, and ending on April 14, 2013. The outage schedule is based on VELCO constructing the proposed project from daylight to dusk seven days a week (generally 6:30 A.M. to 6:30 P.M.) in order to reduce the impacts on affected generation units, avoid winter peak load and summer load, and avoid the agricultural season. Extending the outage beyond six weeks would adversely impact affected generation units, local distribution utilities, and may add to project costs. During the outage of the K-41 Line, the VELCO transmission system from Littleton, New Hampshire, through St. Johnsbury and Lyndonville, Vermont, will be operated essentially as a radial line and would expose portions of northern Vermont to a single contingency. Underwood pf. at 27; exh. MOU at 2-3; tr. 11/13/12 at 9-12 (Underwood).

64. Project construction will occur mostly in wooded areas or farm fields rather than residential areas. The closest residential structure to the construction in the right-of-way of the K-41 Line is approximately 100 feet away from structure 467. VELCO agrees not to perform any construction activities on the weekends related to structure 467. Underwood pf. at 27; exh. MOU at 2-3.

65. Construction in the right-of-way of the K-41 Line that is located within 1200 feet of any residence will occur between the hours of 7:00 A.M. and 5:00 P.M., Monday through Friday,

between 8:00 A.M. and 5:00 P.M. on Saturday, and will not occur on Sundays and State and Federal Holidays. Underwood pf. at 27; exh. MOU at 2-3; tr. 11/13/12 at 9-12 (Underwood).

66. The use of the lay-down area for the proposed project will result in limited air emissions from the use of internal combustion engines from construction equipment operation at the site and from general access to the site by pick-up trucks and passenger vehicles. Construction activities in the lay-down area will include the implementation of dust control measures including maintenance of the existing construction entrance, and the application of water or calcium chloride, as needed. Underwood/Follensbee pf. supp. at 5.

67. The lay-down area for the proposed project will not have a significant impact on noise levels. Noise generated from use of the site will be limited to intermittent vehicle ingress and egress, equipment operation, and workers' voices. The current use of this site generates noise from large truck traffic and heavy equipment on a scale similar to the proposed project and therefore the minor noise impacts associated with the construction work will likely be indistinguishable from the normal noise and traffic from this site. Underwood/Follensbee pf. supp. at 5-6.

Water Pollution

[10 V.S.A. § 6086(a)(1)]

68. The proposed project will not result in undue water pollution. This finding is supported by findings 69 through 72, below, and by the specific findings under the criteria of 10 V.S.A. §§ 6086(a)(1)(A) through (G), below.

69. The proposed project will not require a Construction Stormwater Discharge Permit. The proposed project will utilize best management practices ("BMPs") for erosion prevention and sediment control ("EPSC") to protect wetlands and waterways, in accordance with the applicable sections of the Vermont Standards and Specifications for Erosion Prevention and Sediment Control and the VELCO Environmental Guidance Manual ("VEGM"). To ensure compliance with BMPs, a VELCO Environmental Compliance Inspector will oversee the construction activities for the proposed project. Follensbee pf. at 5-6.

70. The proposed project will not involve the installation of any oil containing equipment. The proposed project will not result in the discharge of waste to any surface water or groundwater resources. Follensbee pf. at 5-6.

71. The use of the lay-down area will not require any significant ground-disturbing activities as the majority of the site has been developed with stone and gravel, resulting in an essentially flat area with low erosion potential. The operators of the site have an existing Multi-Sector General Permit for stormwater discharge coverage issued by the Agency of Natural Resources. VELCO will implement any necessary BMPs to control stormwater discharge from the lay-down area in accordance with the VEGM. Underwood/Follensbee pf. supp. at 4.

72. The closest identified aquatic resource down gradient of the lay-down area is located over 750 feet to the east of the area. There will be no impacts to water quality associated with utilization of the lay-down area. Underwood/Follensbee pf. supp. at 4.

Headwaters

[10 V.S.A. § 6086(a)(1)(A)]

73. The proposed project will not have an undue adverse affect to headwaters. This finding is supported by findings 74 through 76, below.

74. The proposed project is located in a headwaters area because the K-41 Line corridor crosses surface waters that can be characterized as headwaters. The proposed project will involve the replacement of structures 330 and 327B which are located in a headwaters region. Follensbee pf. at 6-7; tr. 11/13/12 at 31-32 (Follensbee).

75. The proposed project will not have an undue adverse affect to headwaters because the proposed work activities will be limited to activities within the existing maintained utility line corridor and existing off-corridor access routes. Access to the proposed project will occur by overland travel on existing access routes, both on and off the existing cleared utility line corridor. Follensbee pf. at 6-7.

76. Stream crossings will be temporary in nature and performed in accordance with VELCO's Stream Crossing Guidance. The proposed project will utilize appropriate BMPs for

EPSC to mitigate impacts on any headwaters area. Follensbee pf. at 6-7: tr. 11/13/12 at 31-32 (Follensbee).

Waste Disposal

[10 V.S.A. § 6086(a)(1)(B)]

77. The proposed project will meet applicable Department of Health and Department of Environmental Conservation ("DEC") regulations for the disposal of wastes, and will not involve the injection of waste materials or any harmful or toxic substances into ground water or wells. This finding is supported by findings 78 and 79, below.

78. The proposed project will not generate any regulated wastes other than small amounts of general construction debris and obsolete material, and will not involve the injection of waste materials or harmful or toxic substances into groundwater or wells. VELCO will dispose of all construction debris in accordance with DEC waste management regulations and guidance documents. Follensbee pf. at 7.

79. If a release of a petroleum-based product were to occur during the proposed project construction phase, VELCO would contain it, report to the DEC (as necessary), remove contaminated material from the site and dispose of it properly, and then restore the area in accordance with VELCO's Hazardous Material Release Response and Clean-Up Procedure, contained within the VEGM, and applicable State and Federal Regulations. Follensbee pf. at 7.

Water Conservation

[10 V.S.A. § 6086(a)(1)(C)]

80. The proposed project will not have an undue adverse impact on water supplies. The proposed project will not require a connection to, or use of, water supplies beyond the potential for a very limited amount of water application to control dust and to support vegetation establishment (if needed). If water is required as part of the proposed project, VELCO will obtain it through a municipal water supply or other appropriate source. Follensbee pf. at 7-8.

Floodways

[10 V.S.A. § 6086(a)(1)(D)]

81. The proposed project will not have undue or adverse impacts on floodways or floodway fringes. This finding is supported by findings 82 through 84, below.

82. The majority of the proposed project will be located outside of floodway and flood fringe boundaries. Follensbee pf. at 8.

83. There is one proposed work location at existing structure 290 that is located within a Federal Emergency Management Agency ("FEMA") mapped floodway. Structure 290, located near the Missisquoi River, will be cut off at ground level and a new structure will be located approximately 35 feet to the northeast of the current location. The movement of structure 290 away from the top of the river bank will greatly reduce the potential of the structure being compromised by flood events associated with the Missisquoi River. Follensbee pf. at 8-9; McNamara pf. at 5.

84. The proposed work in the floodway will be limited to an existing structure replacement and will not require the placement of additional permanent fills within the floodway. The work will not have any permanent impacts to mapped floodplain areas, nor will it restrict, divert, or increase the flow of floodwaters and will not endanger the health, safety, or welfare of the public or riparian owners during floods. Follensbee pf. at 8.

Streams

[10 V.S.A. § 6086(a)(1)(E)]

85. The proposed project will not result in undue or adverse impacts on streams. This finding is supported by findings 86 through 88, below.

86. There are approximately 141 streams within the K-41 Line right-of-way, with 52 streams classified as perennial, 75 as intermittent, and 14 as ephemeral. Follensbee pf. at 9; exh. VELCO-TAF-2.

87. The proposed project will require access across several streams. VELCO will accomplish all necessary stream crossings in accordance with VELCO's Stream Crossing Guidance contained within the VELCO Environmental Guidance Manual, which will mitigate

any impacts associated with the crossing of streams. Follensbee pf. at 9; exhs. VELCO-TAF-3 and MOU at 3.

88. The proposed work activities will not create additional stream or stream buffer impacts. The proposed project will not require right-of-way clearing or expansion and all stream crossings will be temporary in nature. Follensbee pf. at 9-10; exh. VELCO-TAF-3.

Shorelines

[10 V.S.A. § 6086(a)(1)(F)]

89. The proposed project will not have an undue, adverse impact on shorelines. This finding is supported by findings 90 through 96, below.

90. The K-41 Line crosses the Missisquoi River in two locations, between structures 124 and 125 and structures 290 and 291. The land between structures at these two locations is considered a shoreline area. There is no work proposed in the vicinity of the Missisquoi River between structures 124 and 125, nor is any work proposed at structure 291. The proposed project will replace structure 290. Follensbee pf. at 10.

91. Structure 290 is presently situated partially within the mean high water mark on the eastern side of the Missisquoi River. The proposed project will relocate structure 290 approximately 35 feet northeast of the existing structure's location. VELCO will dismantle the existing structure and cut the existing poles off at ground level so as not to disturb the banks of the Missisquoi River and the unnamed tributary. VELCO will remove the material and hardware from the area. Follensbee pf. at 10-11; exh. MOU at 3-4.

92. If the poles remaining below ground from structure 290 fall into the Missisquoi River at some future time and act as an impediment to recreational use (e.g., swimming, boating, etc.) in this reach of the river, as determined by the Secretary of the ANR, then VELCO will promptly remove them from the river. Exh. MOU at 3-4.

93. Structure 290 will no longer be located between the mean high and low-water marks of the Missisquoi River. Follensbee pf. at 10-11.

94. The existing transmission line crosses the Missisquoi River. The proposed project will replace the existing crossing and is needed to safely and reliably maintain the transmission system. Underwood pf. at 24-25; Follensbee pf. at 10-11.

95. Shoreline vegetation will be managed according to VELCO's Transmission Vegetation Management Plan, which retains compatible woody vegetation along the shoreline. Tr. 11/13/12 at 40 (Follensbee).

96. The shoreline and waters of the Missisquoi River will be retained in their natural condition. The proposed project will allow continued access to the waters and recreational opportunities provided by the waters. Shoreline vegetation will be retained and will screen the project structure from the river waters. Existing shoreline vegetation will be retained and will stabilize the bank from erosion. Tr. 11/13/12 at 37-42 (Follensbee).

Wetlands

[10 V.S.A. § 6086(a)(1)(G)]

97. The proposed project will have no undue or adverse impacts to significant wetlands under Vermont Wetlands Rules. This finding is supported by findings 98 through 105, below.

98. There are approximately 207 wetlands within the K-41 Line right-of-way with 92 classified as Class II Wetlands and 115 classified as Class III wetlands. One potential vernal pool is located near the K-41 Line right-of-way, however no work will occur within the vicinity of this feature. Follensbee pf. at 11-12; exh. VELCO-TAF-2.

99. VELCO will adhere to the following ANR and U.S. Army Corp of Engineers ("USACE") approved hierarchy for crossing and working in wetlands: (1) use existing access routes; (2) conduct work under winter or dry conditions; and (3) when winter or dry conditions are not present, or do not exist for a sufficient period, utilize temporary construction mats. Exh. MOU at 3.

100. VELCO will perform all work in accordance with the VEGM, which includes wetland impact minimization measures and information on the installation and maintenance of EPSC measures to ensure that potential sediment transport from work locations will not adversely impact wetlands. Follensbee pf. at 14.

101. VELCO staff have met with DEC and USACE staff to discuss the proposed project, potential impacts on wetlands, and the avoidance, minimization, and mitigation measures that will be employed during the construction phase of the proposed project. Follensbee pf. at 12-13.

102. The proposed project is covered under the Vermont Wetland Rules as an allowed use and therefore does not require a wetlands permit through DEC. Follensbee pf. at 13.

103. The proposed project will fall under the current Department of Army General Permit State of Vermont as Category 1 Non-Reporting activity and will be subject to General Conditions of the General Permit, but would not require specific authorization from the USACE. The current USACE General Permit for the State of Vermont expired on December 5, 2012. VELCO will review the new USACE General Permit and will verify the need, or lack thereof, for specific authorization from the USACE to complete the proposed project in accordance with potential new regulations. Follesnbee pf. at 13.

104. The use of the lay-down area will not impact any state or federally regulated wetlands or wetland buffers. Underwood/Follensbee pf. supp. at 6.

105. Potential impacts to wetland resources as a result of the proposed project will be minimal, as the proposed project will be limited in nature, short in duration, and completed utilizing approved BMPs and hierarchy for working within wetlands. There will be no undue adverse effects to wetlands as a result of the proposed project. Follensbee pf. at 12-14.

Sufficiency of Water and Burden on Existing Water Supply

[10 V.S.A. §§ 6086(a)(2)&(3)]

106. The proposed project will not require a continual water supply. The construction of the proposed project may require a limited amount of water for dust control and/or vegetation establishment. VELCO will obtain such water from a municipal water supply source or other appropriate water supply location. The amount required for such activities would be minimal and would not burden existing water supplies. Follensbee pf. at 14.

Soil Erosion

[10 V.S.A. § 6086(a)(4)]

107. The proposed project will not result in unreasonable soil erosion or a reduction in the capacity of the land to hold water so that a dangerous or unhealthy condition may result. This finding is supported by findings 108 and 109, below.

108. VELCO will perform proposed project activities pursuant to VELCO's VEGM which includes measures that DEC has approved to maintain water quality. Moreover, the proposed work is limited in nature and will not require a construction stormwater discharge permit. Follensbee pf. at 15.

109. VELCO, as needed during proposed project construction, will install erosion prevention and sediment control measures, perform inspections and maintenance of the erosion control measures, take proactive steps to address areas that pose potential erosion hazards and will seed and stabilize each work location to ensure proper revegetation occurs. Follensbee pf. at 15.

Transportation Systems

[10 V.S.A. § 6086(a)(5)]

110. The proposed project will not cause unreasonable congestion or unsafe conditions with respect to use of highways, waterways, railways, airports and airways, and other means of transportation existing or proposed. This finding is supported by findings 111 through 116, below.

111. The proposed project will result in short-term traffic impacts due to deliveries of project equipment and materials to the construction sites. Such deliveries will use existing roads with vehicles that are commonly used on public roads. Underwood pf. at 28.

112. Large transport trucks will arrive at and depart the lay-down area during the early stages of construction, delivering materials such as poles, crossarms, construction mats and other ancillary material to construction site locations. Underwood/Follensbee pf. supp. at 7.

113. Construction traffic to the lay-down area will be primarily located on established trucking routes (i.e., Route 105), which minimizes construction-related traffic on roads other than those where VELCO will perform construction. Underwood/Follensbee pf. supp. at 7.

114. Construction traffic to the right-of-way will use existing access roads and routes where VELCO owns land or easement rights. Routine maintenance for the proposed project will use the existing access roads and routes. Underwood pf. at 9.

115. VELCO will coordinate with the Agency of Transportation on the transportation of poles that require excess length permits. The proposed project is not anticipated to need excess weight permits. Tr. 11/13/12 at 17-18 (Underwood).

116. VELCO has contacted all local municipalities to inform them of the proposed project. Tr. 11/13/12 at 17-18 (Underwood).

Educational Services

[10 V.S.A. § 6086(a)(6)]

117. The proposed project will not cause any unreasonable burden on the ability of any municipality to provide educational services. Underwood pf. at 28.

Municipal Services

[10 V.S.A. § 6086(a)(7)]

118. The proposed project will not cause any unreasonable burden on the municipalities to provide municipal or governmental services. Use of the lay-down area will not burden any services provided by the affected municipalities or the surrounding communities. The temporary use of the lay-down area will not present any incremental impacts on fire, police, or other municipal services. Underwood pf. at 28; Underwood/Follensbee pf. supp. at 7.

Aesthetics, Historic Sites
and Rare and Irreplaceable Natural Areas

[10 V.S.A. § 6086(a)(8)]

119. The proposed project will not have an undue adverse effect on the scenic or natural beauty, aesthetics, historic sites or rare and irreplaceable natural areas. This finding is supported by findings 120 through 130, below.

120. The proposed project consists of upgrades to an existing transmission line. The K-41 Line is approximately 51-miles in length and is comprised of 330 wood-pole double-circuit structures and 210 wood-pole single-circuit structures. The proposed project involves the completed emergency work and the replacement of 24 structures and the addition of two new structures. The replacement structures for the proposed project will use poles 10 to 25 feet longer in height than the existing poles, with the average replacement structure approximately 15 feet higher in above-ground height. McNamara pf. at 3; Underwood pf. at 6.

121. While the proposed replacement pole structures are taller than the existing poles, the structures will be similar in design, appearance and in the same general locations as existing structures, except two new mid-span structures. The two mid-span structures are designed to avoid having to significantly increase the height of an existing structure. McNamara pf. at 5-6; Underwood pf. at 6; Underwood pf. 2nd Supp. at 2.

122. Certain replacement structures will include some minor differences from the existing structures, including the use of weathering steel cross arms instead of wood cross arms. Such difference is likely imperceptible, because the steel cross arm finish appears wood-like from the ground. The proposed project may replace the conventional porcelain insulator discs with lightweight polymer insulators at each new structure. The lightweight polymers will appear smaller from the ground. McNamara pf. at 7.

123. The proposed lay-down area will be located within an existing gravel pit operation. The total land area that will be in use is approximately 3.8 acres. The area surrounding the lay-down area is primarily agricultural and commercial with a few residences located nearby. The closest residence is located over 550 feet away from the proposed area. The lay-down area will be in use for approximately 4 months. Underwood/Follensbee pf. supp. at 2-3; exh. VELCO-ZU/TAF-1.

124. The proposed project does not result in an adverse impact to aesthetics of the area. The proposed project site is appropriately located to limit views for a large extent of the surrounding geographical area. Public views that may be possible are limited in duration and in most cases foreground or middle-ground vegetation and structures will limit views. Proposed project upgrades will be an incremental increase in the visible transmission infrastructure. Buscher at 2-4; exh. VELCO-MJB-2.

125. The proposed project would not be offensive or shocking because it will not be a dominant or highly visible feature in the landscape and is not out of character with its surroundings. Buscher at 3-4; exh. VELCO-MJB-2.

126. The proposed project will not violate a clear, written community standard intended to preserve the aesthetics or scenic beauty of the area. Buscher at 3-4; exh. VELCO-MJB-2.

127. All reasonable mitigation steps have been taken for the proposed project. The proposed project has been located within an existing transmission corridor and the minor design elements proposed will significantly reduce visibility from publicly accessible viewpoints. Buscher at 3-4; exh. VELCO-MJB-2.

128. The proposed project area contains no below-ground sites included in the National Register of Historic Places and/or State Register of Historic Places. Follensbee pf. at 17-18; exh. VELCO-TAF-4.

129. There are 83 above-ground historic places (which are listed on either the State or Federal Register of Historic Places) within a half-mile radius of the K-41 Line. The proposed project does not propose to demolish or alter any historic sites nor significantly alter the setting or character of any historic resource. The area of potential effect for above-ground historic sites will be seven historic sites located within one-quarter mile of the proposed project. All proposed work locations either have the existing structures already visible from the site where incremental increases in pole heights will have no substantial effect on the resource's viewshed and/or existing topography, vegetation, and/or distance from the work locations obscure the structures from the resource. There will be no undue adverse effect on historic sites. Follensbee pf. at 18-19; Exh. VELCO-TAF-5.

130. There no rare and irreplaceable natural areas in the proposed project area. Follensbee pf. at 15-16; exh. VELCO-TAF-2.

Necessary Wildlife Habitat and Endangered Species

[10 V.S.A. § 6086(a)(8)(A)]

131. The proposed project will not have an undue, adverse impact on any necessary wildlife habitat or endangered species. This finding is supported by findings 132 through 136, below.

132. The K-41 Line right-of-way contains six rare, threatened, and endangered ("RTE") species (or potential habitat) and two natural communities. The construction work for the proposed project will avoid all RTE species and natural communities. Follensbee pf. at 15-16; exh. VELCO-TAF-2.

133. VELCO will flag in the field prior to any work being performed in the vicinity of four threatened and endangered or rare plant species: (1) Fernald's Sedge; (2) Greene's Rush; (3) Blunt-Lobed Grapefern, and (4) Vasey Rush. VELCO will conduct a survey to re-establish the extent of the populations of these plants if construction work for the proposed project occurs more than two years after completion of the survey discussed in Appendix 4 to VELCO Exhibit TAF-2 (Natural Resources Report). Exh. MOU at 4.

134. There are deer wintering areas and bear habitat adjacent to and throughout the K-41 Line right-of-way. VELCO will complete the proposed work within the existing cleared and regularly maintained right-of-way and existing access routes which will limit impacts to deer and bear habitats. Follensbee pf. at 17; exh. VELCO-TAF-2.

135. In order to limit disturbance of deer during their wintering period (December 15 through April 15), and more specifically during the month of March when wintering deer are highly vulnerable to disturbance, VELCO will comply with the following conditions for conducting work on, or in the vicinity of, structures 430 and 431X.

> (1) No construction activities will occur in March;
> (2) No blasting will be performed;
> (3) The use of mechanized equipment and machinery will be limited to only that which is necessary; and
> (4) Site preparation and construction activities for structures 430 and 431x will take place as follows:
>
> > (a) VELCO may perform site preparation activities beginning March 25, 2013. Site preparation activities will be limited to: (1) staking of structures and anchors; (2) placing materials, such as poles and hardware, within right-of-way at structure locations; and (3) installing construction mats and preparing access routes.
> > (b) On April 1, 2013, VELCO will begin all construction activities necessary to install such structures including but not limited to core drilling, excavation of structure holes, and construction of new or replacement structures.
> > (c) In order to complete all Project construction by April 14, 2013, the last day of the scheduled K-41 Line outage, VELCO must be able to perform these construction activities within a two-week period and will not adhere to

> any construction hour restrictions related to these two poles. The nearest residence from these two poles is approximately 2000 feet away.
> (d) If requested by VELCO, ANR will assess the deer wintering conditions in this area in the beginning of March 2013 to determine, in ANR's sole discretion, whether it would be appropriate to relax the timing restrictions for site preparation and construction activities associated with structures 430 and 431x.
> (e) Should the anticipated dates of the outage (March 4 - April 14) change, necessitating a different work schedule, then ANR and VELCO will confer to agree upon a work schedule that avoids disturbance of deer during their wintering season.

Exh. MOU at 4-5.

136. VELCO does not anticipate the need for tree-clearing activities, although it is possible that select tree-clearing activities may be necessary to allow for equipment access to certain locations. If select tree-clearing activities are necessary for equipment access, it will be minimal and will not alter the overall vegetative community or existing habitat. Follensbee pf. at 17.

Development Affecting Public Investments

[10 V.S.A. § 6086(a)(9)(K)]

137. The proposed project will not unnecessarily or unreasonably endanger the public or quasi-public investment in any public facilities, services or lands, or materially jeopardize or interfere with the function, efficiency, or safety of the public's use or enjoyment of or access to any such facility, service or lands. Underwood pf. at 28.

Least-Cost Integrated Resource Plan

[30 V.S.A. § 248(b)(6)]

138. VELCO does not have an integrated resource plan. VELCO prepares a Long Range Transmission Plan every three years. In this Plan, VELCO evaluated the K-41 Line at its intended thermal rating of 150 MVA and found the rating to be adequate with respect to its thermal limits. Harding pf. at 12.

Compliance with Electric Energy Plan

[30 V.S.A. § 248(b)(7)]

139. The proposed project complies with the *Vermont Electric Plan* (the "Plan"). The Plan sets forth several basic objectives that the proposed project must satisfy in serving the public interest. The Plan seeks to ensure grid reliability and also strives to maintain a safe, reliable, affordable, and environmentally sound energy supply. Similarly, the Plan recognizes statutory goals in which Vermont meets its energy service needs in a manner that is adequate, reliable, secure, sustainable and that assures affordability. Underwood pf. at 28-29.

140. The proposed project strikes the proper balance between each of these objectives. The proposed project will allow VELCO to operate the K-41 Line at its intended 150 MVA rating and thus maintain electric reliability in the region at a low cost. The proposed project complies with the Plan's environmentally sound energy supply criteria as the project will be constructed within an existing right-of-way where VELCO has previously installed electric infrastructure. Underwood pf. at 29.

141. On October 19, 2012, the Department filed a determination, pursuant to 30 V.S.A. § 202(f), stating that the proposed project is consistent with the *Vermont Electric Plan*.

Outstanding Resource Waters

[30 V.S.A. § 248(b)(8)]

142. There are no waters on or near the proposed project that have been designated as outstanding resource waters. Follensbee pf. at 5.

Waste to Energy Facilities

[30 V.S.A. § 248(b)(9)]

This criterion is not applicable because the proposed project is not a waste-to-energy facility.

Existing or Planned Transmission Facilities

[30 V.S.A. § 248(b)(10)]

143. The proposed project will be served economically by existing or planned transmission facilities without undue adverse impact on Vermont utilities or customers. Neither VELCO nor Vermont distribution utilities will need to build any additional transmission facilities to accommodate the proposed project. The proposed project is necessary to serve existing and planned transmission facilities. Harding pf. at 13.

IV. DISCUSSION

VELCO has provided sufficient evidence to demonstrate that the proposed project complies with the Section 248 criteria. I recommend that the Board issue a CPG, with conditions, authorizing construction of the proposed project.

On October 19, 2012, VELCO, the Department, and ANR filed an MOU with proposed findings of fact and an order and all the parties agreed that the Board should issue a CPG. Parties waived their rights under 3 V.S.A. § 811 to review and comment upon a proposal for decision, and present oral argument, provided that the Board issues an order consistent with the MOU. At the Technical Hearing, VELCO agreed on the record to additional construction-hour restrictions for residences with 1200 feet of the proposed project. Given that the Proposal for Decision is consistent with the MOU, except for the agreed-upon changes to construction- hour restrictions, I am not circulating the Proposal for Decision to the parties for their review and comment.

V. CONCLUSION

Based upon the evidence in the record, I conclude that the proposed project, with the conditions identified below:

(a) will not unduly interfere with the orderly development of the region with due consideration having been given to the recommendations of the municipal and regional planning commissions, and the recommendations of the municipal legislative bodies;

(b) is required to meet the need for present and future demand for service which could not otherwise be provided in a more cost-effective manner through energy conservation programs and measures and energy efficiency and land management measures;

(c) will not adversely affect system stability and reliability;

(d) will result in an economic benefit to the state and its residents;

(e) will not have an undue adverse effect on aesthetics, historic sites, air and water purity, the natural environment and the public health and safety, with due consideration having been given to the criteria specified in 10 V.S.A. § 1424a(d) and §§ 6086(a)(1) through (8) and (9)(K);

(f) is consistent with the principles of least-cost integrated resource planning;

(g) is in compliance with the electric energy plan approved by the DPS under § 202 of Title 30 V.S.A.;

(h) does not involve a facility affecting or located on any segment of the waters of the State that has been designated as outstanding resource waters by the Water Resources Board;

(i) does not involve a waste-to-energy facility; and

(j) can be served economically by existing or planned transmission facilities without undue adverse effect on Vermont utilities or customers.

I recommend that the Board approve the proposed project and issue a CPG for construction of the proposed project with the conditions set forth in the proposed Order and CPG, below.

Dated at Montpelier, Vermont, this 16th day of January, 2013.

s/Mary Jo Krolewski
Mary Jo Krolewski
Hearing Officer

VI. ORDER

IT IS HEREBY ORDERED, ADJUDGED AND DECREED by the Public Service Board ("Board") of the State of Vermont that:

1. The findings, conclusions, and recommendations of the Hearing Officer are adopted.

2. The proposed restoration of an existing 115 kV line that extends from Highgate to Irasburg, Vermont (the "K-41 Line"), by Vermont Electric Power Company, Inc. and Vermont Transco LLC (together, "VELCO"), will promote the general good of the State of Vermont in accordance with 30 V.S.A. Section 248, and a certificate of public good to that effect shall be issued.

3. Construction, operation, and maintenance of the proposed project shall be in accordance with the plans and evidence as submitted in these proceedings. Any material deviation from these plans or substantial change to the proposed project must be approved in advance by the Board. Failure to obtain advance approval from the Board for a material deviation from the approved plans or substantial change to the proposed project may result in the assessment of a penalty pursuant to 30 V.S.A. §§ 30 and 247.

4. VELCO shall restrict construction activities in the right-of-way of the K-41 Line that are located within 1200 feet of a residence to the hours between 7:00 A.M. and 5:00 P.M., Monday through Friday, between 8:00 A.M. and 5:00 P.M. on Saturday, and shall cease construction activities on Sundays and State and Federal Holidays. For construction activities near structure 467, VELCO shall restrict construction activities to the hours between 7:00 A.M. and 5:00 P.M., Monday through Friday, and shall cease construction activities on Saturdays, Sundays, and State and Federal Holidays.

5. Prior to performing any blasting for the proposed project, VELCO shall file a project-specific blasting plan with the Board for approval.

6. Upon relocation of structure 290, VELCO shall dismantle the existing structure and cut the existing poles off at ground level so as not to disturb the banks of the Missisquoi River and the unnamed tributary. VELCO shall remove the material and hardware from the area. If the poles remaining below ground from structure 290 fall into the Missisquoi River at some future time and act as an impediment to recreational use in this reach of the river, as determined by the

Secretary of the Agency of Natural Resources, then VELCO shall promptly remove them from the Missisquoi River.

7. VELCO shall adhere to the following Agency of Natural Resources and U.S. Army Corp of Engineers approved hierarchy for crossing and working in wetlands: (1) use existing access routes; (2) conduct work under winter or dry conditions; and (3) when winter or dry conditions are not present, or do not exist for a sufficient period, utilize temporary construction mats.

8. VELCO shall accomplish all necessary stream crossings in accordance with the VELCO Stream Crossing Guidance contained within the VELCO Environmental Guidance Manual.

9. VELCO shall flag in the field prior to any construction work being performed in the vicinity of four threatened and endangered or rare plant species: (1) Fernald's Sedge; (2) Greene's Rush; (3) Blunt-Lobed Grapefern, and (4) Vasey Rush. VELCO shall conduct a survey to re-establish the extent of the populations of these plants if construction work for the proposed project occurs more than two years after completion of the survey discussed in Appendix 4 to VELCO Exhibit TAF-2 (Natural Resources Report).

10. For construction on, or in the vicinity of, structures 430 and 431X, VELCO shall comply with the conditions, listed in Finding135, to limit disturbance of deer during the wintering period.

Dated at Montpelier, Vermont, this 17th day of January, 2013.

s/James Volz	)	
	)	PUBLIC SERVICE
	)	
s/David C. Coen	)	BOARD
	)	
	)	OF VERMONT
s/John D. Burke	)	

OFFICE OF THE CLERK

FILED: January 17, 2013

ATTEST: s/Susan M. Hudson
Clerk of the Board

Notice to Readers: This decision is subject to revision of technical errors. Readers are requested to notify the Clerk of the Board (by e-mail, telephone, or in writing) of any apparent errors, in order that any necessary corrections may be made. (E-mail address: psb.clerk@state.vt.us)

Appeal of this decision to the Supreme Court of Vermont must be filed with the Clerk of the Board within thirty days. Appeal will not stay the effect of this Order, absent further order by this Board or appropriate action by the Supreme Court of Vermont. Motions for reconsideration or stay, if any, must be filed with the Clerk of the Board within ten days of the date of this decision and Order.